

FSB Role Description – FSW Product Development Lead (PDL)

Roles & Responsibilities

- Responsible, from both a Project and FSB point of view, for the successful GSFC-in-house implementation and test of multiple element(s) of mission FSW that together make up a distinct integrated FSW system (e.g., spacecraft FSW or instrument FSW). Responsible for the quality and timely delivery of each FSW product.
- Reports directly to the FSW Systems Manager, the Spacecraft or Instrument Manager and also to FSW Branch Management.
- Responsible for end-to-end FSW systems engineering, trade studies, engineering analyses, architectures, hardware interfaces, ground interfaces, tools and communications among all technical elements of the mission associated with the FSW system for which FSB has development responsibility.
- Responsible for negotiating appropriate fidelity and quantity of FSW test environments and simulations associated with the full range of FSW development and test activities. Advocates full hardware and simulation fidelity adequate to support all FSW test activities and post-launch maintenance.
- Advocates the FSW Branch standards and guidelines associated with FSW development and test of the assigned FSW products, ensures that FSB processes are fully understood by FSW team staff and confirms routine adherence to them. Makes recommendations for changes to FSB processes when appropriate and accepts the decisions of the FSB CCB.
- Develops the mission-specific management and technical plans for FSW development and test, in conjunction with other FSW Leads. Develops and acquires approvals for the FSW Product Plan. Ensures development and test team awareness and implementation of all relevant aspects of the Product plan.
- In conjunction with the FSW Systems Manager and other Project staff, provides recommendations for development and maintenance of the Project level FSW Subsystem Requirements documentation. Ensures that the derived detailed FSW requirements are traceable to parent documents and that the detailed FSW requirements are complete, reviewed and approved by the Project and the FSB.
- Ensures rigorous maintenance and controls of all FSW requirements documentation.
- Ensures that the Flight Software Test Plan, developed in conjunction with other FSW Leads, will result in a robust FSW test program. Obtains buy-in for the full contents of the FSW Test Plan from all FSW Leads. Ensures team awareness and implementation of all relevant aspects of the Plan - - via the FSW Test Team Leads.
- Responsible for the FSW schedules and budgets. Defines the FSW build plans and delivery schedules, in conjunction with other FSW Leads to be consistent with mission schedules (e.g., I&T) and hardware deliveries.
- Mentors sub-team leads and staff as necessary to ensure quality and productivity. Enables team members to grow in skills and responsibilities such that increased capabilities of staff are evident following their team assignments.
- Ensures that the Flight Software Configuration Management Plan will result in a robust FSW CM program. Obtains buy-in for the full contents of the FSW CM Plan and Procedures from all FSW Leads. Ensures team awareness and implementation of all relevant aspects of the CM documentation.

- Works with the FSW Lab Manager to ensure effective IT Security on all equipment, effective version control of all equipment, software and data files, proper use of equipment logs, property tracking, etc.
- Responsible for contractor task management activities.
- Identifies risk areas that could impact the FSW system. Recommends risk mitigations. Measures, tracks and reports status of each risk to management.
- Evaluates risks and mitigation strategies identified by other FSW Leads.
- Reports monthly (to the FSW Systems Manager, the S/C or instrument manager, and FSB management) on status of the FSW system, associated FSW elements and each risk – even when Project decisions to accept the risks have been made.
- Provides to FSB management, on a monthly basis, team resource estimates and actuals (FSW staffing, cost, and schedule). Changes to the resource plan are to be clearly identified throughout the software life-cycle.
- Develops and presents FSW development lessons (positive as well as negative) that were learned during the FSW development and test activities.
- Responsible for establishment and maintenance of FSW lab. environments. This includes any procurements related to the development and test environments.
- Supports W Va IV&V as directed.
- Provides constructive inputs to branch management regarding the performance contributions of each member of the team as required. Additionally provides constructive suggestions for improvement and growth. Provides substantive recommended performance plan elements for each staff member on a fiscal year basis.
- Provides recommendations to the FSW Branch Standards CCB regarding desired improvements to approved and draft FSW Branch standards and processes. Identifies the need for new FSW development, test, operations, and maintenance standards and processes.
- Ensures effective and rigorous configuration management and control of all FSW products and tools. Develops CM documentation. Reports and tracks all problems and changes to the FSW, databases, test environments, tools, simulators, requirements, etc.
- Ensures restorable backups are done on a routine basis
- Ensures effective FSW maintenance plans.

Ownership and Approval Authority

The FSW Branch Head is the owner of this role description. The FSB Standards CCB has approval authority.

Change History

Version	Date	Change
1.6	06/30/06	DCR #174.
1.5	03/23/06	DCR #152 - added explicit statement of procurement responsibility to FSW lab. environments bullet.
1.4	06/28/04	DCR #77 – change name from Position Description to Role Description.

1.3	01/27/04	DCR #38 - addition of planning, process, and requirements management words. DCR #41 - Improved Performance Plan words
1.2	12/11/03	DCR #31 - addition of performance plan words.
1.1	09/23/03	DCR #23 - wording change to CM bullet.
1.0	08/22/03	Initial draft.